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ABSTRACT

A study tested the hypothesis that spoken language has a strong direct influence on the encoding process, and that speakers of nonstandard dialects have a different set of problems with the written language and make identifiably different errors than do speakers of standard dialect. The subjects, 13 standard and 13 nonstandard dialect speakers enrolled in adult basic writing courses, completed a variety of writing tasks in different discourse modes as well as tasks involving oral language. Errors were counted and categorized as follows: those not linguistically based, but rather "ignorant" or perceptual in origin; those that might be explained as nonlinguistic or linguistic in origin; those that were unambiguously linguistic in origin; and those noted but not counted. Results indicated that, among adult basic writers (1) differences in reading comprehension skills seemed not to account for differences in total quantities of errors or for differences in types of errors committed; (2) such is the overriding influence of nonstandard dialect on encoding behavior, that even when composing and cognitive skills were on the same level, nonstandard dialect speakers were likely to produce many more errors than were standard dialect speakers; and (3) nonstandard speech patterns apparently accounted for two highly stigmatized categories of errors--hypercorrect linguistic forms and wrong whole-word verb forms--and for a large portion of omitted inflectual suffixes. (Materials used in the study are appended.) (FL)

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TRACING ERRORS TO THEIR SOURCES:

A STUDY OF THE ENCODING PROCESSES OF ADULT BASIC WRITERS

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Tracing Errors to their Sources: A Study of the Encoding Processes of Adult Basic Writers

To select approaches which will be predictably effective in reducing errors in writing, it is clearly important for teachers to know why their students make specific errors. Shaughnessy, of course, was driven by this insight as she probed for the roots of students' problems with the written language; and the patterns of error which she found in her large sample of basic writing texts

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have certainly convinced us that error is not random. But precisely how specific errors relate to specific sources of error for specific writers remains a complicated question, as a number of investigations have shown. Bartholomae has found that errors that look identical on the page can have very different causes, depending on the writer,[1] and recent studies in reading suggest that the presumed correlation between spelling errors and deficient reading skills does not hold up in individual cases.[2]

My own early interest in the question had been focussed almost exclusively on dialect influence, that is, the ways in which oral language patterns seem to account for particular deviations from the linguistic norms of standard written English. As I became familiar with recent research in this area, I realized I must also consider the possibility that other influences might be at work in producing errors which I had been uncritically ascribing to writers' speech patterns. Whiteman, in her study of the writing of black and white working class American children, noted a "non-dialect-specific tendency to omit certain inflectional suffixes."[3] Investigations by Kirschner and Poteet and by Sternglass had demonstrated that the pattern of errors of college remedial groups, assumed to have different speech patterns, did not show substantial qualitative differences.[4] Hartwell had asserted bluntly that "'dialect interference in writing,' in and of itself, does not exist," postulating instead a single cause for errors, namely, unfamiliarity with the print code.[5]

While I was reading these reports, I was simultaneously experimenting with a variety of instructional approaches, noting

which ones worked best with whom, and speculating on their relative success in reducing different kinds of errors. By degrees, it became clear to me that the precise parameters of dialect influence on error could not be determined except in the context of a study which considered not only dialect but other possible causes of error as well. My colleagues at York College/CUNY, Carolyn Kirkpatrick and Michael Southwell, joined with me in these speculations and together we came up with some strong hunches about the various sources of error in the cognitive, perceptual, and linguistic processes which underlie writing. Even as we struggled with the complexity of the question, we remained convinced that spoken language, in one way or another, is a major, if not <u>the</u> major source of problems with the written language. This interest led to the research I am reporting here, a recently completed case-study investigation of the encoding process, with emphasis on sources of error. (My work was supported by the National Endowment for the Humanities under a College Teachers Fellowship award, 1982-83). In the course of this study, I wanted to resolve, if I could, some of the existing disputes and ambiguities about the sources of common errors, and in the process to develop some diagnostic procedures which would be not only reliable but also simple enough for classroom teachers to use as part of their normal assessment of students' writing skills.

DEFINITIONS ·

A few definitions at this point may head off confusion about the goals and design of my study. The distinction between composing (controlling meaning in writing) and encoding (controlling the visual symbols which represent meaning on the page) is basic to this study's design and method of analysis. As a skill, encoding includes control over all the norms of the written language--the norms relating both to its visual forms (spelling, punctuation, capitalization, indentation, etc.) and to its linguistic forms (denoting tense, number, case, word-class, etc.). Encoding is distinct from composing inasmuch as it is concerned with the givens of the written code, whereas composing is concerned with the options of the written language which that code represents, the almost infinitely various ways of conveying meaning in writing. However, insofar as encoding has to do with linguistic forms, and therefore with the meanings signaled by these forms, it has a crucial area of overlap with composing. This is one of the reasons why error analysis is so complex. And it's a point to which I shall return in the interpretation of my findings.

For the purposes of this investigation, I define error narrowly as any clear deviation from the norms of standard written English. This definition places error in the domain of right/wrong, not of better/worse. So defined, errors manifest weaknesses in encoding skills, not in composing skills.

A further distinction seems important to make--that between

dialect and grapholect, two terms which help to define each other, and which also suggest what I mean when I use the terms standard and nonstandard to describe language patterns. Dialect, as I use the term here, refers to varieties of the vernacular, the spoken as distinct from the written language. In contrast, the grapholect is both written and, to a large extent, standardized.[6] Indeed, in this connection, my colleagues and I would argue that the term standard is used most accurately to describe the written (not spoken) language. However, a certain dialect may approximate the linguistic forms which characterize the grapholect, and can in this way (rather loosely, but without distortion) be called standard. And a dialect which does not approximate these forms is in the same way called nonstandard. As these definitions imply, I consider that "error" is not an appropriate term to apply to speech-form variants, but is an entirely appropriate one to apply to deviations from the established norms of the written language.

DESIGN

It was my hypothesis, then, that spoken language has a strong direct influence on the encoding process, and that speakers of nonstandard dialect have a different set of problems with the written language and make identifiably different errors than do speakers of standard dialect. Additionally, I suspected that dialect influence interacts with other sources of error, still further differentiating these two groups as writers. This hypothesis, clearly, was basic to my thinking about error, and therefore basic to the design of my study. It required that I study two types of error-prone writers, speakers of standard

dialect, and speakers of nonstandard dialect, and that I also try to identify other factors which might be contributing to the patterns of errors observed, such as variations in composing ability, reading proficiency, and level of cognitive skills. I decided to choose subjects in such a way as to control, insofar as possible, the presence of still other potential influences on kind and quantity of error. My task in trying to sort out multiple variables would certainly be easier if my subjects were all mature individuals with approximately the same level of postsecondary education, similar amounts of writing experience, and similarly strong motivation to overcome serious problems with the written language.

I had additional reasons for wanting to work exclusively with mature adult learners in my case studies. For one thing, the persistence of their problems points to deep-seated processes at work. Also, adult learners are more likely to be perceptive, intelligent, and serious about learning. Because many older basic writers have been struggling to master the written language for years, their frustrations have made them aware of their difficulties with encoding. In fact, in prior interviews with adult learners, I had found that they sometimes analyze the reasons for their encoding problems with remarkable insight.

Thus my design took shape. For my case studies, I needed adult basic writers with identifiably different speech backgrounds and diverse reading, cognitive, and composing skills, but with similarly mature and earnest attitudes toward learning, particularly in their efforts to overcome their problems with error.

Subjects

It was my original intention to observe six individuals, or cases, in close detail. In my search for subjects who were both alike and different in the various ways I have described, I drew on populations of adult basic writers at two sites well known to me. At the first site, Elizabeth Seton College in Yonkers (where I had previously taught), I collected specimens of student writing, primarily from weekend college, practical nursing, and evening school students. I identified the writers with the most serious encoding problems and then interviewed about twenty, most of whom turned out to be white, middle-class, mature students, native speakers of standard English who had returned to school after a lapse of some years, at considerable personal sacrifice since most of them were working full-time. At the other site, the Bronx Psychiatric Center Staff Education Program, I had the advantage of having recently worked closely with the students, all hospital workers, for whom I had set up a totally self-instructional model of the COMP-LAB Program, the experimental basic writing course which I had helped to initiate at York College. Most of the thirty error-prone writers I chose to interview at this site were native speakers of nonstandard English who had been taking college and other postsecondary education courses for several years. These members of the hospital staff (clerical workers, mental health therapy aides, and nurses) were mature and responsible. Because they were required to write daily reports on the job, they were

highly motivated to improve their writing skills both for their career advancement and for their ongoing course work.

During the preliminary screening, in which I sought information about family background, early schooling, reading habits, and attitudes toward writing, I taped the interviews and later analyzed them for interviewees' grammatical patterns in speech. In so doing and in giving prospective subjects a brief reading test (a shortened version of the College Board's Degrees of Reading Power), I became aware of a wide range of variation in their oral language forms, reading skills, and the kinds and quantities of errors they made. I then realized I must enlarge the number of case studies I had originally planned to investigate, for I feared that I might be led astray by the idiosyncratic behaviors of a few individuals, and so miss the patterns which might cut across all these individual differences. Additionally, in working with a larger number of subjects, I could combine the case-study method of investigation-in-depth with at least some of the advantages of a quantified study. Although the size of the sample must still necessarily be small, it would be large enough to suggest significant trends. At the same time, I would not be limited just to heaps of faceless errors. That is, when I interpreted the statistical outcomes of my study, it would be in the light of the more personal knowledge (in Polanyi's sense of the term[7]) that I had gained from my sustained acquaintance with the real live authors of the texts in which these errors occurred.

For these reasons, I went from the six case studies of my research proposal--three standard dialect (SD) speakers and three

nonstandard dialect (NSD) speakers--to 26, or thirteen of each, chosen from the pool of fifty I had interviewed and tested. I chose subjects who seemed likeliest to meet the varied criteria explained above.

The most fundamental of these criteria related to language patterns. My task was to select from my pool of potential subjects, representing a spectrum of spoken dialect, two groups from the two ends of this spectrum such that each could be said to use identifiably standard or nonstandard grammatical forms.[8] (As it happened, individuals from both sites were included in each group.) So identified, the SD group consisted of thirteen subjects who consistently used the inflectional forms of standard English. Of these, five used standard forms in every respect I could identify, six occasionally deviated in minor ways from literate usage (saying things like "between you and I"), and two lapsed, rarely, into nonstandard forms characteristic of working class speech (like "she don't care"). This group, all native Americans except one long-time U.S. resident of Jamaican birth, was mainly white and female, but included four men and four middle-class blacks. The NSD group consisted of thirteen subjects who had in common variability in their use of grammatical inflections. Six subjects habitually used NSD forms but none exclusively characteristic of Black English Vernacular, and seven habitually used BEV as well as NSD forms. The members of this group were all native Americans, all female except two, and all black except one. In identifying subjects as SD or NSD speakers, I was guided by my reading of the sociolinguists--Fasold, Labov, Shuy, Stewart, Wolfram, and others--and by an ear for dialect forms educated over two decades

of working closely with urban and inner city students. I did not make final identification of the two groups until subjects had talked at length in a relaxed way on a number of occasions, sometimes to me alone, and sometimes in small friendly groups, about their personal concerns.

Language patterns, as indicated above, were not my only criteria for my choice of subjects. The students selected for both groups were, so far as I could judge, all mature and highly motivated individuals with similar amounts of writing experience. Most had already completed one to four semesters of college course work, and all but one in each group were in their twenties or older. And, of course, all had problems with error ranging from serious to acute. At the same time, subjects within each group varied, apparently rather widely, in reading proficiency, level of cognitive skills, and composing abilities. However, I had good reason to believe, despite these necessary individual variations, that further testing would show that my two speech groups were similar in their range of differences. Under these circumstances, group comparisons in respect to error could be made more readily without fear that factors other than dialect were at the root of differences.

Procedures

My primary measure was to count and categorize the errors in subjects' own writing (error categories are discussed below in connection with my predictions about the outcome of the count). As a control on the kinds of errors likely to be made by each subject,

I assigned identical writing tasks to all. These tasks called for narration in both the present and past tense, as well as descriptive, expository, and argumentative writing. In completing these papers, most subjects generated about 2000 words. For those who tended to write very brief papers, I fleshed out their word count with additional papers in similar modes which they wrote for class assignments or as reports on the job. In this way, the number of words in which errors were counted was about the same for each group.

As a possible check on my primary error count, I designed an additional "measure of encoding skills" in which subjects were asked to write a 416-word passage from dictation, a passage rich in forms and structures likely to induce common errors. I recorded my own voice (by then familiar to subjects), reading the passage slowly and distinctly in standard English with suitable pauses to give subjects time to turn off the tape and write what they had heard. To make sure that the meaning of the passage would be readily grasped by all subjects, I sent it to the College Board staff for analysis, and the "degrees of reading power" score assigned to it placed it well within the reading competency of all my subjects except one, and with her I reviewed the passage orally until I was sure she understood it clearly. (See below for an explanation of the DRP method of measuring reading competence in terms of text difficulty.)

While writing from dictation holds in abeyance the heavy demands that composing makes on a writer's attention, it does not altogether suspend the demands of the meaning-making process as the

normal concomitant of encoding. As an error measure, such an exercise has an advantage over freely composed writing in that it requires individual writers to use specific forms and conventions which might not happen to occur in samples of their own writing, or which they might avoid using. (For those who are curious, or who may wish to use the dictation instrument themselves, the full text is given in Appendix A.)

If this procedure worked as an error measure, it might prove a useful shortcut for teachers trying to get a handle on their students' error problems. So I planned to test the instrument's reliability by comparing the distribution of errors in the dictation exercise to the distribution of errors that occurred in subjects' own writing.

Next, I designed instruments and mapped out procedures which would enable me to measure the relationship of subjects' errors not only to their speech patterns, but also to other possible influences on error: level of reading comprehension, of cognitive skills, and of composing ability. I also planned to question them about their reading habits and perceptions of the written code.

Reading specialists at CUNY recommended the College Board Degrees of Reading Power as the most suitable reading measure for my sample and in view of my purposes. The DRP assigns scores according to readers' ability to comprehend texts of gradually increasing difficulty, rather than by comparing their ability to that of average readers on various grade levels. The perfect score of 98 (achieved by one of my subjects) indicates ability to read

professional journals on the graduate level; the lowest score received by any of my subjects, 51, indicates ability to read nothing more difficult than newspapers and magazines aimed at teenagers. The DRP norming method overcomes the drawbacks of conventional reading tests which cannot be used for comparing readers with widely diverse skills, and which do not offer poor readers who happen to be adults materials appropriate to their more mature interests. Another advantage of the DRP is that, in contrast to traditional reading tests, it measures skills specific to reading as a mental task, not those cognitive skills which can develop independently of reading experience.

Because I also wanted to get an idea of my subjects' reasoning abilities, apart from reading, I devised a task which required them to analyze a 1200-word piece of expository prose, an abbreviated version of an article from a magazine for educated adults[9]--relatively uncomplicated in its syntax and vocabulary, but complex in its ideas--and then in their own words to write a brief summary (150 words or less), including only the author's main point and her most important supporting ideas. To make sure that the reading aspect of the task would not be a problem for the poorer readers, I sent the article I selected to the College Board for analysis. The DRP score assigned to it placed it well within the reading competency (as also measured on the DRP scale) of all but a few of my subjects. For these, the vocabulary (not the syntax) was too difficult, so I let them use a dictionary. Actually, even these subjects assured me that they had no difficulty in reading the article. Almost all subjects found it interesting. Although

success on this summarizing task is conditioned somewhat by reading and writing skills, it calls more on the ability to analyze and synthesize than the other reading and writing tasks which the subjects performed, and evidence of these abilities was the primary consideration in assigning scores.

In a blind reading of summaries, I used a holistic scale of 1-5, reading for content and ignoring encoding errors in the evaluation. As a check on this rating, I asked an experienced basic writing teacher also to score the summaries, following the same procedures. The combined scores of the two ratings resulted in a "summary score" for each subject, ranging from 2 to 10. These scores confirmed my impressions (gathered in interviews with subjects, in conferences with their instructors, and in reading all the other written work in their folders) of the levels of cognitive skills which individual subjects brought to academic tasks. It's my belief that the summary score is a fairly accurate indication of cognitive skills for the subjects in my study.

Two of the writing tasks used in the error count were also designed to measure composing skills. One of these was in the expressive and the other in the extensive mode (in Emig's sense of those terms [10]). Procedures similar to those for the summaries were followed to rate these papers on a holistic scale of 1-5, using a simplified version of the Wilkinson model of writing maturity[11] as a primary trait scoring guide. Because I wanted to separate out composing from encoding skills, ratings again ignored errors as much as possible. The scores assigned by each rater to a given subject were added together and the results, on a scale of 2-10,

are referred to as subjects' "composing scores." (Analysis showed that the interrater reliability coefficient for both scores was high--.88 for the summary scores and .80 for the composing scores.)

Finally, I spent many fruitful hours with subjects, applying the more exploratory procedures of the case-study approach to writing research. These included reading protocols, editing protocols, and interviews, or, more accurately, informal and spontaneous questioning of subjects during protocol sessions. I also made limited use of composing protocols.

To produce reading protocols, I taped subjects reading samples of their own writing and other texts characterized by both standard and nonstandard English forms. Using the insights of miscue analysis, I examined these tapes for evidence of differences between subjects' spoken language forms as reflected in their oral performance and the language forms appearing in the texts. For the editing protocols, subjects tried to correct errors, and as they did so, explained why they were making specific corrections. These protocols gave me a clear idea of subjects' ability to detect differences between their oral reading and the text they were editing, and whether or not the rules they applied (if any) in making corrections were app opriate.[12]

Predictions

My predictions about the kinds and quantities of errors which would appear in the writing of each speech group in my study were

based on my hypotheses about the sources of error. I counted the most common, serious, and systematic errors that occurred in the writing of my sample. Most basic writing teachers would no doubt find the list of errors counted, as it appears below, entirely familiar, but the specification of some of the items and their order might strike them as a bit strange. The format of my list, however, is far from random; my hypotheses dictated these specifications and shaped that sequence as I shall explain shortly.

These are the categories of errors counted in subjects' writing (for a fuller description and examples of each category, see Appendix B):

1. Errors in sentence punctuation
2. Basic errors in pronouns and adverbs
3. Subject-verb agreement errors which involve intervening words
4. Errors in writing conventions, that is, the visual conventions of the written code (like capitalization, use of apostrophes, etc.)
5. Spelling errors
6. "Wrong words," including homophone confusions
7. Omitted words, including copulae
8. Omitted inflectional suffixes
9. Inflectional suffixes added inappropriately
10. Wrong whole-word verb forms

The list is sequenced in four clusters: (1) errors which I intended to count but not try to trace to their sources (categories 1-3), (2) errors which I speculated were not linguistically-based but rather might be "ignorant" or perceptual in origin (categories 4-6), (3) errors which might be explained as either nonlinguistic or linguistic in origin (categories 7-8), and (4) errors which I hypothesized are unambiguously linguistic in origin (categories 9-10). Errors were counted in the first category in which they might be placed. This ensured a bias <u>against</u> my hypothesis: If a

way of accounting for an error other than linguistic influence were possible, it would be accepted.

Categories #1-#3 were of peripheral interest to my study because too little is clearly understood about their causes to make their occurrence or non-occurrence as specific error types susceptible to interpretation. However, such errors are too common to exclude from the overall error count. Category #3 is inserted where it is on the list to make sure that errors in verb agreement which occur in complicated constructions (common enough even among English teachers) are not included in categories #8 or #10 where they may occur for very different reasons. About the remaining categories, my reasoning was as follows: Errors in categories #4-#6 ought to be non-dialect-related since they involve visual symbolization, not linguistic forms. (I believed that these problems can be traced to some failure to adequately control the learned visual code, stemming perhaps from simple ignorance of its norms or from faulty visual discrimination skills, that is, difficulties in fully <u>seeing</u> the symbols on the page.) On the other hand, errors in group #10, I reasoned, must be linguistically-based. A person might omit the <u>-s</u> ending in <u>he dance</u> for any one of several reasons, as Whiteman, Bartholomae, and others[13] have pointed out. But it's hard to see any reason why a writer would produce a whole-word verb form as in the phrase <u>she have</u> except that it occurs in his dialect. Similarly, it appeared that errors in category #9 (hypercorrections, like <u>she droved</u>) are most likely also to be linguistically-based, although less directly--arising perhaps from the conflict which writers

experience between their acquired nonstandard speech patterns and those demanded by standard written English. Errors in categories #7-#8 (omitted words and omitted suffixes) were ambiguous; they might or might not be linguistically-based.

In the light of this reasoning, I made the following predictions about the kinds and quantities of errors which would occur in the writing of the two speech groups in my study. Since I was convinced that errors in categories #4-#6 were due to deficient mastery of the print code and not to the influence of nonstandard dialect, and since I had done all that I could to insure that the range of factors related to literacy (level of formal schooling, reading proficiency, etc.) was the same for both speech groups, I predicted that these errors would occur in equal quantities in the writing of both groups. And since I attributed the errors in categories #9 and #10 exclusively to the influence of nonstandard dialect, I predicted that these errors would occur only in the writing of subjects who spoke NSD. Further, since errors in categories #7 and #8 might occur for either reason, I predicted that they would occur for both reasons (and so be more frequent) in the writing of the NSD group. Finally, because of the large number of errors likely to be traceable exclusively to nonstandard dialect, I predicted that the NSD speakers would make more errors overall than the SD group.

FINDINGS

Since this study was designed most basically to provide the opportunity to observe individual behavior, the quantity of data collected was limited. In some but not all instances, it turned out to be adequate for statistical reliability. Keeping in mind the relatively small amount of data available for analysis, I'll indicate in my discussion the confidence that can be placed in particular findings.

As Table 1 shows, NSD speakers' total error rates, both in their own writing and in the dictation exercise, are, as hypothesized, indeed significantly higher than those of the SD speakers.

[Insert Table 1 about here.]

[See page 59]

The quantity of errors counted and the consistency of the distribution of errors in the two measures used (a finding to be discussed below) give confidence that the error rates do in fact accurately reflect the quantities of errors which subjects normally make in their writing.

As noted, an effort was made to match the two groups of subjects in ways considered most relevant to literacy skills. It's necessary to consider whether this attempt was successful before concluding that speech differences account for the differences in

quantity of error. Table 2 presents data bearing on this question.

[Insert Table 2 about here.]
[See page 60]

T-tests applied to composing and summary scores show that the two speech groups are not significantly different in their performance on these two measures. As a further check on the relationship of summary and composing scores to quantity of errors, all subjects' individual scores on the measures were compared to their individual error rates. Analysis showed a zero-order correlation between composing scores and error rates both in subjects' own writing, and in the dictation exercise; that is, no relationship whatsoever was found between composing scores and error rates. Also, no significant relationship between summary scores and error rates in subjects' own writing (r=.27), nor in the dictation exercise (r=.36) was found. So it seems that the two groups are equivalent in cognitive and composing abilities, and that neither differences in these skills between the two groups as a whole nor differences among individual subjects account for their differences in error rates.

This outcome corresponds with my own impressions that some of the best composers and clearest thinkers among my subjects, and indeed among my students over the years, were among the poorest encoders, and vice versa. Because of the absence of validated instruments for measuring adults' ability to reason in verbal terms apart from reading, and for measuring their composing skills apart from encoding, the measures and procedures I used for

these purposes are necessarily experimental and exploratory. Still, the caution I'm inclined to feel about the above findings is tempered when I consider how consistent they are with my sustained impressions of subjects' cognitive and composing competencies.

Despite efforts to match the two groups for reading level, Table 3 reveals that they belong to significantly different populations of readers.

[Insert Table 3 about here.]
[See page 61]

Mean scores of the two groups are 13.9 points apart and are significantly different at the .01 confidence level. Furthermore, the NSD group's speed of reading is significantly lower than that of the SD group (the test has no time limit, but sixty minutes to complete the test, according to the DRP manual, is average). Here, we may suspect, is a clue other than dialect to the differences in error rates between the two groups (particularly if we recall the research indicating that deficient reading skills generally predict poor writing skills[14]). But this is not so: further analysis shows no significant correlations between subjects' DRP scores and their corresponding error rates across the groups, both in their own writing (r=-.36) and in the dictation exercise (r=-.27). And within the groups, analysis shows zero-order correlations between error rates and reading scores. In other words, no significant relationships were found between the number of errors individual subjects made in writing and how well they performed on the reading test.[15] This finding invites confidence since it is

based on a comparison between the reading scores of a substantial number of subjects (26) on an exhaustively-tested instrument and on error rates derived from two sizable counts. (Although I was surprised at the large difference in the range of the reading scores of the two groups, which I had tried to match with one another in that respect, I had anticipated that error rates and reading scores for individuals would not correlate, for I had observed that some of the best readers in both groups made many more encoding errors than some of the poorest readers did.)

The negative evidence, then, is that differences in cognitive, composing, and reading skills do not seem to account for the differences in the error rates of the two groups. At the same time, Tables 4 and 5 below provide positive evidence that dialect differences do in fact account for the differences observed.

[Insert Tables 4 and 5 about here.]
[See pages 62 and 63]

As seen in Table 4, NSD speakers make more errors in almost every category than SD speakers do, including categories #4-#6, where I had expected no differences. But, as I had hypothesized, NSD speakers make many more errors in the categories for which a dialect-related differential was predicted (#8-#10). Indeed, "suffixes added" (hypercorrect linguistic forms) and "wrong whole-word verb forms" occur <u>only</u> in the writing of NSD speakers. As Table 5 demonstrates, 7.2% of all the errors committed by this group in their own writing occur in these categories, and up to 28% of their total errors (depending on the

attribution of omitted suffixes) may have their source in NSD. Just as revealing is the fact that, if in their own writing we exclude all categories of error which could be linguistically-based, the two groups present an essentially consistent picture as to distribution of error in the remaining categories, as shown in Table 6.

[Insert Table 6 about here.]
[See page 64]

In sum, the two speech groups make errors in roughly the same <u>proportions</u> except for categories where there is the possibility of linguistic influence.

To test whether the observed differences in quantities of errors made by the two speech groups are statistically significant, the numbers of errors each group made in particular categories were compared. Analysis of the number of errors in categories #8-#10 (suffixes omitted, suffixes added, and wrong whole-word verb forms), those posited to be linguisically-based, suggests that the two groups are fundamentally different in respect to these errors. The obtained F-ratio was found to be 21.1 for linguistic error in their own writing and 15.31 for linguistic error in the dictation exercise. Since two different populations exist, further comparison is unwarranted. In an analysis of the number of errors in categories #4-#6, those posited to be nonlinguistically-based (writing conventions, spelling, and wrong words), the two groups were found to be significantly different (t-value=2.169; $p<.05$). In the dictation exercise, however, no significant difference was

found between the two groups in numbers of errors in these categories (t-value=1.101). In statistical terms, then, in respect to errors posited to be linguistically-based, the study sample has been drawn from two different populations. In respect to other errors, the difference between the two groups is measurable, but not dramatic.

Table 5 allows us to compare the distribution of errors in the dictation exercise and in subjects' own writing. The dictation exercise fails as an error-measure in the first three categories. But when we compare the percentage of errors which each speech group commits in the remaining categories in their own writing to the percentage in the dictation, the amounts are found to be approximately the same. This consistency suggests that the dictation exercise could be a fairly reliable alternative to counting most types of errors in subjects' own writing, at least all those types with which this study is concerned.

To test further for possible connections between reading skills and error, subjects' numbers of errors in category clusters #8-#10 and #4-#6 were compared to reading scores. Since SD and NSD groups belong to different populations of readers, the difference was controlled by analyzing the scores of SD and NSD speakers separately. In both groups, for both types of errors (those hypothesized to be dialect-related and those not dialect-related), in their own writing and in the dictation exercise, zero-order correlations were found between reading scores and numbers of errors. In other words, in both speech groups, no relationships whatsoever were found between quantities of specific types of errors committed and reading scores.

CONCLUSIONS

Although (as previously noted) from a statistical perspective the scope of this study is limited, the quantity of data examined is not negligible, and the investigation analyzes variables and relationships among them not previously considered. Moreover, the findings discussed so far are entirely consistent with my case-study observations. It would seem, then, that the following conclusions can be drawn from these findings with considerable confidence:

1. Among adult basic writers,[16] differences in reading comprehension skills seem not to account for differences in total quantities of errors, nor for differences in types of errors committed.

2. Among adult basic writers, such is the overriding influence of nonstandard dialect on encoding behavior, that even when composing and cognitive skills are on the same level, nonstandard dialect speakers are likely to produce many more errors than standard dialect speakers.

3. Among adult basic writers, nonstandard speech patterns apparently account entirely for two highly stigmatized categories of errors, hypercorrect linguistic forms and wrong whole-word verb forms, and also for a substantial portion of omitted inflectional suffixes.

CASE-STUDY FINDINGS

The results of the above quantitative analyses are clear, but cast no light on <u>why</u> nonstandard dialect is a source of error, or on the causes of non-linguistically-based error, or on how to distinguish one influence from another in ambiguous cases. Closer examination into the patterns of error for each group and the results of reading and editing protocols help provide some of the answers.

A composite picture of errors typically committed by each group in writing from dictation gives an illuminating overview. Single underlinings indicate errors which are common to both groups; double underlinings indicate errors which are limited to NSD speakers. It is revealing that there are no errors peculiar to the SD group. (Keep in mind, however, that both of the versions below differ substantially from any individual subject's transcription since fifty percent of all errors on the exercise were idiosyncratic, that is, made once by one writer; whereas all errors in these versions were made by two or more writers. Where two or more misspelled a word, the most common or a representative misspelling is given.) Refer to Appendix A to compare the underlined errors to the original passage.

Standard Dialect Speakers' Transcription

Some people have strange fears. For example, after a shower of mediors passed over New Mexico a women in Vermont refused to leave her house for five years. A man who has a violant fear of lightening swears that he's going to find a place to live where rain never falls. Several woman who live in an ideal enviorment in Arizonia are so frighten of germs that they receantly bought sergical masks which they wear night and day weather at home or at work. Even though people with these fobias are often quit inteligant, there to terified to listen to reason. Its no use telling them that their being silly. There minds are parilized by fear and they just cant hear what your saying. On the other hand some peoples fears are based on personal experience. A friend of mine is frighten of elevators, but she certainly has a good reason. When ever she gets on a crowed elevator, this shocking memory always comes back to haunt her. It all began in Georgia where my friend usaly spends her vacation. with her cousins. Once she when to stay with them in amold manshion which they had leased for the summer. The first night she slept their around midnight their where strange noises under her window. She jumped up and looked out, in the moonlight she saw a coach. . . .

Nonstandard Dialect Speakers' Transcription

Some people has strange fears, for example, after a shower of medior pass over New Mexico a women in Vermount refuse to leave her house for five years. A man who have a vilent fear of lighting swear that he going to find a place to live were rain never falls. Sevral woman who lived in a idea enviorment in Arziona are so frighten of germs that they reasonly brought sugrical masses which they wear night and day weather at home or at work. Even thought people with these fobia are offten quiet intelegent there to terify to lisson to reasons. Its know use telling them that there being silly. There mines are parilize by fears an they just can hear what your saying. On the other hand some people fear are base on personnel experiance. A friend of mines is frighten of elavators but she certenly have a good reason. When ever she gets on a crowed elavator this shocking memory alway come back to hunt her. It all began in Georgia where my friend usally spends her vacation with her cousin. Once she went to stay with them in a old mantion which they had lease for the summer. The frist night she slept their around midnight their was strange noises under her window. She jump up and look out, in the moonlight she saw a coach. . . .

The differences here clearly dramatize my finding that these two speech groups represent two different populations of basic writers. Perhaps the most remarkable feature of the NSD

transcription is the transformation of whole-word verb forms (dictated in standard English) into nonstandard forms, as in the phrases "people has. . .", "A man who have. . .", and "their was strange noises. . ." Subjects literally heard one word and wrote an entirely different word. These category #10 errors naturally do not occur in the dictation exercise as often as they do in subjects' own writing, but the fact that they occur at all attests to the strength of these forms as vehicles of meaning for NSD speakers. Such manifestations of the working of deep inner linguistic processes have been well-documented in reading[17] and in speech.[18] Here we see a dramatic instance of this transformational process at work in writing, as standard forms, spoken slowly and distinctly into subjects' intently listening ears, emerge from their pens in what are to them more meaningful and familiar nonstandard shapes.

In editing sessions with SD speakers reading NSD texts, I saw the same process at work in reverse. For example, the sentence "Two clients on Ward 14 was moving chairs" was read aloud by an SD speaker, a proficient reader, as "The client on Ward 14 was moving chairs"--so powerfully does the form was signal the singular for SD speakers![19] This phenomenon illustrates a truth that some critics of the theory of nonstandard dialect influence on writing seem to have missed: Spoken language is not just a string of sounds any more than a text is just a string of symbols; both are manifestations of underlying language patterns. As a consequence, writers who speak a somewhat different language from the one they

must encode have more to learn than the differences between the sound of isolated lexical items and the way they look in writing.

Subjects in my SD group, though error-prone writers themselves, found the NSD verb forms in the reading protocols highly distracting. (One of them, who five minutes before had been complaining with some asperity about his teacher's obsession with his mistakes, exclaimed with horror as he read a report containing these forms.) The contrary was true for the NSD group: the editing protocols showed that these are the errors which the NSD speakers are least able to detect. They might notice lapses in writing conventions like a missing apostrophe in a he don't, but they tended to read over and past linguistically-based errors both in their own writing and in the writing of others. I found that ignorance of standard written English was not usually the problem. When I underlined several verbs at random and asked subjects which ones were wrong, most could not only identify the errors but could tell me why they were wrong and how to fix them. But in reading for meaning, and even in reading for correctness, they tended not to notice them. Perl also documents this phenomenon when she reports that of the 550 "editizing" changes made by her subjects (all apparently nonstandard dialect speakers), only 26 were verbs. She reports, on the other hand, that 191 were spelling changes.[20] The data resulting from analysis of editing and composing protocols in the course of the current study support Perl's data and suggest that conventions peculiar to writing, like spelling and punctuation, are much easier to objectify than features which are

common to speech and writing, particularly grammatical forms.

Because their natural language forms happen to be unacceptable in writing does not make it any easier for NSD speakers to see, much less to avoid them. It appears, not only from their performance on the dictation exercise and in the reading protocols, but also from their own introspective reports, that these forms are basic components of the language in which they think, and therefore in which they compose--and so in which they inevitably encode. As one subject remarked, "Whatever you think is just what you write down. And that's the way I was thinking" (when she wrote was instead of were). It follows that the more that she and all NSD speakers are urged to compose in standard English, the more they experience this area of overlap between the composing and encoding processes as an area of conflict.[21]

Hypercorrections (category #9) are almost as much of a problem for NSD speakers as incorrect whole-word verb forms. Examples in the dictation passage are "lisson [listen] to reasons" and "a friend of mines." Instances which occurred further on in the exercise are "gaved up," "droved off," and "doesn't seems." Subjects used two-part carbonless forms and had been instructed when finished to read over their transcriptions while listening to a replay of the tape and to make corrections as necessary on the second copy. Errors in whole-word verb forms almost always appeared on the original copy and were mostly left uncorrected, but hypercorrections were usually introduced as corrections on the second copy. Some of these errors (like "a friend of mines"), I

discovered from the protocols, are carryovers from spoken language habits and so can be accounted for in the same way as #10 errors. But when I asked subjects to explain hypercorrections that they did not use in speech, they only occasionally were able to do so in terms of an understandable misapplication of the rules of standard written English (as in constructions like "it makes her looks better"). Much more often subjects expressed only a vague fear that the form they had originally written wasn't quite right. As I looked at some of these timid emendations, added in an uncertain hand, I felt, regretfully, that these writers related to the written language as to Simon Legree. But in certain cases, these hypercorrect forms, often from the same writer, seemed to be confidently written and completely spontaneous, such as, typically, a -d or -s on the infinitive form. I never heard this hypercorrection uttered in conversation, but it did turn up on several reading protocols. In other words, this hypercorrect form had apparently become an established part of some subjects' formal usage in reading and writing.

For this group of writers, multiple hypercorrect forms may be the clearest indicators both of their struggle to resolve the conflict between their spoken language and the one they're trying to write, as well as of the linguistic insecurity which grips them as soon as they pick up a pen. Over the years when they should and could be growing in literacy skills, this insecurity apparently becomes for many a generalized malaise which affects every aspect of their experience as writers, and, unfortunately, their overall

self-image as learners. As one of them mourned, "There's a root word and a ending to it, basically, and if I could connect these two. . . . I can understand it while I'm doing it, but then I put the book down and that's it. . . . A paper just terrifies me."

In respect to omitted suffixes (category #8), researchers have noted their occurrence in the writing of both speech groups. This study found that they occurred about five times more frequently in the writing of the NSD group. However, this was a frequent error for SD speakers as well. As the transcription composite shows, many SD speakers omitted the suffix on the participial form frighten[ed]; and later in the exercise some SD speakers dropped the ending on the past-tense verbs jump, look, pack, and ask. These instances suggest the influence of pronunciation patterns--what I call speech influence, a source of error for all writers, in contradistinction to specifically grammatical influence which operates only for NSD speakers. These errors are not caused by underlying linguistic patterns; when SD speakers would read their writing aloud, they would consistently pronounce endings which they had omitted on the page. And in no way does phonological environment explain dozens of other instances of omitted suffixes, including -ing omissions, which turned up in the SD group's writing. So Whiteman's "non-dialect-specific tendency to omit inflectional endings" must be operative here--a tendency which has nothing at all to do with linguistic patterns, phonological or grammatical.

Although dialect manifestly does not seem to account for SD

speakers' omission of inflectional endings, we cannot assume the reverse: that dialect does explain their omission by NSD speakers. For one thing, they make many of the same types of nonlinguistic errors as the SD group, like omitted -ings. More important, I found that I could not dependably extrapolate from a generalized impression of a subject's language patterns to specific errors in her writing. Neither did the quantity of NSD forms in speech reliably predict the quantity which characterized the speaker's writing, for a subject often added endings in speech which he omitted in writing, and vice versa. Moreover, the pattern of these discrepancies differed with different NSD speakers. The literature on miscue analysis shows that when subjects read for meaning, their underlying language patterns prevail in their oral performance, regardless of the forms, standard or nonstandard, which characterize the text. So I relied on the subjects' reading protocols to reveal these underlying patterns. If the form used in writing matched oral patterns (for example, if a subject wrote the phrase "he walk" and read it as "he walk"), then I could be reasonably sure the error was linguistically-based. But if oral and written forms diverged (for example, if a subject wrote the phrase "he walk" but read it as "he walks"), then I could conclude that some influence other than linguistic was at work producing the error.

In my analysis of the problem of omitted suffixes, the editing protocols were also useful for measuring the strength of the influence at work, linguistic or otherwise, for in editing aloud

some writers showed that they noticed the difference between their oral production and the text before them, and some were, in varying degrees, oblivious to the difference, even when urged to listen and compare.

Analysis of subjects' reading and editing protocols suggests that more than half of my NSD subjects' missing _-ed_ suffixes in writing reflect their language patterns (with wide variance from subject to subject), whereas missing _-ed_ inflections in the writing of SD speakers are unrelated to spoken forms, except for an occasional truncated participle or a finite verb ending in a consonant cluster as in the verb _asked_. The _-s_ endings seem to be a much less separable inflection than _-ed_ endings for SD speakers, since they much less seldom omitted them, or if they did, rarely failed to correct them in editing. The same, actually, seems to be true for the NSD speakers; they omitted the _-s_ less often than the _-ed_ inflections, and when they did, the omission appeared to be almost always a reflection of their individual speech patterns. The most common omissions in writing for both groups in order of diminishing frequency were the _-ed_ on participles, the _-ed_ on past tense verbs, _-s_ endings on present tense verbs, and _-s_ endings on nouns.

Too few errors occurred in category #7 (omitted words) to learn much about it. But it's interesting to note that the larger number of words omitted by NSD speakers, in comparison to SD, on the dictation exercise is accounted for mostly by omitted copulae, a dominant feature of Black English Vernacular. This outcome

suggests that this category should be divided into two categories in future studies.

"Wrong words" (error category #6) mark the frontier of the domain of the print code, the written language in its learned and visual aspect. Although I had hypothesized that errors in this category would be equal for both groups, the NSD group made more "wrong word" errors than the SD group. Nevertheless, after close examination of specific errors committed in this category, I concluded that both groups made them for nonlinguistic rather than linguistic reasons. This is clearly the case for homophones like your/you're,[22] or near homophones like than/then. Since these pairs of words are pronounced alike by all native speakers, regardless of dialect differences, some nonlinguistic influence, and not differences in speech patterns, must be the reason why writers confuse them.

One sub-category of wrong words, however, raises thorny questions, questions which must be clarified here because failure to do so in the past has resulted in continuing confusion about the whole issue of dialect influence on writing.[23] This sub-category is composed of errors like when for went, cause for cost, and mines for minds, which some error-analysts have described as dialect-related.[24] Such errors do suggest the influence of the sounds of speech, for in some nonstandard dialects like BEV there is a strong tendency to reduce final consonant clusters. But, as I have indicated above, reliance on sound/letter correspondences can be a source of error for all speakers, SD and NSD alike. This kind

of speech-related influence on error is of an entirely different order from the grammatical influence of NSD. It is common when children are learning to write. When one child writes mouf for mouth and another writes hafto for have to, we have two manifestations of the same phenomenon. These errors underscore the differences between the sounds of lexical items in speech and their representation in writing, differences which all learners must cope with regardless of differences in their dialects. And both errors are susceptible to the same remedy: mastery of the print-code equivalents for these spoken words. On the other hand, if one child writes they hafto and another writes she have to, we are dealing with errors which are traceable to different sources--one to the sounds of speech and the other to underlying grammatical patterns; one to erroneous symbolization of language (a print-code error), the other to the use of an alternate linguistic form correctly symbolized.

Research on spelling has shown that the influence of the sounds of speech on error for both SD and NSD speakers tends to diminish radically as young learners become more literate, but not so the grammatical influence of NSD. For example, errors like nes for nest occur much less often among sixth graders than among second graders, but BEV-speaking sixth graders, unlike their SD-speaking counterparts, continue to write the uninflected form nest for the inflected form nests.[25] Unlike the grammatical influence of NSD, phonological influence, is, therefore, symptomatic of some weakness in mastery of the print code, rather than of the overriding influence of deeper linguistic habits.

Among my NSD speakers, however, the direct encoding of distinctive pronunciations to sound/letter correspondences, which results in misspellings like nes for nest was rare. Much more common were wrong words reflecting the dual influence of distinctive pronunciation patterns and of the print code interacting to produce errors like hole (but never hol) for hold.[26] This phenomenon accounts for the fact that the NSD speakers as a group made more errors in category #6 than did SD speakers. This difference was not, I believe, due to an overall weaker control of the code; indeed, NSD speakers in my sample spelled somewhat more correctly in their own writing than the SD group. But, probably because their pronunciation patterns were more at variance with the sound/letter correspondences of many common English spellings, a few BEV-speaking subjects made an excessively large number of "wrong word" errors, far more than did equally weak encoders in the SD group, and drove up the group error rate in this category. Only subjects with very high error rates overall made many phonologically-based errors: To the extent that an NSD-speaking subject was conversant with the code (as indicated, for example, by her control over spelling and writing conventions), to that extent she did not tend to make this kind of error. Her control of the code, however, bore no relationship to the number of linguistically-based errors she made. In sum, phonologically-based errors were observed to be in proportion to other print-code errors, but linguistically-based errors (categories #8-#10)

persisted in the writing of NSD speakers who otherwise had largely achieved control over the code.

With this apparent exception noted, errors in writing conventions, spelling, and wrong words (categories #4-#6), along with most of the errors in omitted words (#7), and some of those in omitted suffixes (#8), are presumably print-code territory where errors should be attributed to some failure to control the visual code rather than to the overriding influence of acquired language habits.

In studying their shared difficulties with the print code, I tested individual subjects in both groups on the norms which they most frequently violated. I found, for a few subjects, that ignorance of these norms accounted for most of their errors. When these subjects read their own writing and texts produced by other basic writers, I found that they were able to pick out almost all the errors that they knew how to correct. If they passed over an error, it was because they did not know that it was an error. The opposite, however, was true of other subjects. Despite exhortations to read for correctness, they read past their errors, even when they understood the "rule" in question. As they read aloud, these subjects supplied missing endings, even missing words, stumbled over only the most outrageous misspellings, and showed no awareness of the differences between their oral performance and the texts before them.

The majority of subjects fell between these two extremes. Their errors seemed to stem from both sources, but problems of

perception were well in the ascendancy over ignorance. Most of them were aware of the difficulty they had in finding their errors but were unable to make the shift from the role of writer, already in possession of the meaning intended by the symbols on the page, to that of reader, getting meaning not from their heads but from those symbols. One student was able to explain lucidly what was demanded by this shift of perception even though he was not often able to meet these demands: "In my head I was saying 'bringing up my son,' but when I wrote it down I wrote bring, b-r-i-n-g. But then when I went over it I still be saying what the thought was in my mind, 'I was bringing up my son.' I read bringing but it wasn't on the paper. . . . But if I put what I'm writing down, and walk away somewhere and come back five minutes later, and pick it up and read it again, I can find my mistakes. . . . Because by that time, what I've written is out of my mind, and then I can come back--it's like I'm a new person reading it over again. Then I can say comma missing there, period here."

In remarking on the difficulty which this young man and other subjects experienced in perceiving the code, I must shift into a more speculative vein. For the evidence available to me in trying to understand the perceptual process and its relationship to error was much less tangible than the evidence which enabled me to get insight into the linguistic processes which influence error. Reasoning from behavioral clues, I have tentatively concluded that the difficulty basic writers have in trying to shift their attention from meaning to code may be the key to the finding that quantity of error and level of reading comprehension do not

correlate for these writers. Proficient writers, as they read a text, give focal attention to meaning, but characteristically reserve a certain amount of subsidiary attention for the code (to borrow Polanyi's useful terminology[27]). Typographical errors in the text catch their eye even when they're preoccupied with meaning and the code is of no concern to them whatsoever. In editing, they easily reverse the emphasis. Basic writers, in contrast, seem to read almost exclusively for meaning and objectify the code with difficulty. To read at all, of course, they must perceive the code, or at least as much of it as they need to perceive in order to grasp the meaning. These perceptions, however, operate below the level of conscious awareness, and support comprehension while failing to influence the more overt process of editing. Their habit of reading exclusively for meaning is reinforced when they read their own writing, since they already know what they mean without benefit of the written symbols. I have evidence of a possible reason for basic writers' one-sided attention to meaning in reading with almost no attention to code; it may be that for them writing practice followed reading practice by several years and was always stressed much less.

These speculations about basic writers' reading behaviors and their relationship to encoding bear with particular force on my NSD speakers' problems with the code. I have already discussed the linguistic insecurity arising from these subjects' generalized, non-specific consciousness that their spoken forms and the visual forms demanded by the written language correspond only approximately. By degrees I gained some insight into the genesis

of this sense of estrangement between the spoken and the written language as experienced by these speakers. And I gained it partly through studying the anomalous writing and reading behaviors of three standard dialect speakers among my subjects.

The protocols of these subjects indicated that, despite their fully standard spoken grammatical patterns, they omitted inflectional endings in writing up to four times more frequently than the other SD speakers in the group. Moreover, when reading aloud, they showed little awareness of the difference between their written and spoken forms. Two of these three subjects were reading on a college level and both read rapidly. In discussions with them about the problem of omitted inflections and other gross inaccuracies in their writing (seldom due to ignorance of the norms), the fact of their speech background emerged. I discovered that they had both made the transition, apparently in adolescence, from a nonstandard speech background to standard speech patterns in adulthood. As I had observed their performance on reading tasks, it seemed that in reading they moved rapidly from print to meaning, and in this process gave little conscious attention to the code. So it seems probable that, in childhood, when differences between their speech patterns and the written language were considerable, they had formed the habit of not attending to what were, for them, the irrelevant and not especially helpful details of the code. (Not surprisingly, subjects can't recall the specifics of learning to read; all they can say is that they had "big problems.") No doubt this habit of ideographic whole-word reading helped them move forward more rapidly in the acquisition of reading comprehension

skills than they would otherwise have done, but clearly it was no help in correcting their own writing. If true, this helps explain why severe perceptual difficulties like theirs were more common among NSD speakers than among the SD. It may be that these problems in perceiving errors, particularly omitted inflections, have their roots in reading habits formed in childhood under the influence of NSD. Even among those for whom the direct influence of NSD is diminishing or no longer operative as their speech becomes gradually assimilated to SD patterns, this handicap apparently persists.

Besides its possible impact on reading habits, I observed yet another way in which NSD might be responsible for the severe visual discrimination problems common among NSD-speaking subjects. As I listened to some of them reading their writing, I sensed that both linguistic influence and a habit of inattention to the code were operating, and perhaps exacerbating each other as sources of error. While SD speakers derived positive if not consistently reliable support from their spoken language in remedying inadvertent lacunae and inaccuracies in their writing, NSD speakers groped for this support in editing and were frustrated by its absence, or worse, by the error traps into which reliance on speech patterns led them. Some had apparently compensated for this lack by developing a strong visual sense of how words appear on the page, but the majority had not. In any case, I observed that the NSD speakers in editing seemed not to connect the sounds of words as they pronounced them to their visual configurations as readily as SD

speakers did. The two senses, sight and hearing, were less coordinated as they searched for errors during oral editing sessions.[28]

In respect to this complex problem, the remarks of the NSD speakers who had worked on the self-instructional exercises in the COMP-LAB were illuminating. All were in agreement that it was an immense help to hear on the audiotapes, a component of the program,[29] the inflectional endings not pronounced in their dialect in order to visualize these lexical items with their endings when they had to write them. They did not necessarily feel the need to use these pronunciations in their own speech. Instead, as one of them put it, "When I was writing that word [task] with a -s on it, I just had to hear the sound of it in my head."

An alternate, or perhaps concomitant explanation for the editing problems I've been discussing was brought to my attention by some of the NSD speakers who were working hard to learn how to "speak right," as they put it. In conversation they had succeeded in avoiding some of their acquired nonstandard forms, but reported that, when they were involved in composing, they tended to "slip back" and use "bad English" in their writing. This happened, I speculated, because this usage was still part of their inner speech patterns, that is, the language in which the mind speaks to itself. One, for example, had almost beaten her difficulty with the was/were distinction, and used the "right word" fairly spontaneously in speech. When she came across the phrase "there was several patients" in one of her own reports, she said, "There I go again. I don't say that no more. It's out of my past. That only happens when I'm thinking about what I'm trying to write." This

kind of remark was so common among my subjects, including those mentioned above whose speech patterns are now fully standard, that I've tentatively concluded that the influence of NSD is even stronger and more lasting on inner speech than it is on spoken language patterns. Inner speech habits, then, may reinforce faulty perceptual habits to produce errors in the writing of those whose present spoken language would suggest little influence from NSD in respect to specific errors. In communing with themselves, as in the act of composing, they tend to revert to their earliest acquired language patterns.

I'll conclude these speculations with comments on another quite different problem adding to the NSD speakers' insecurity about writing. This stumbling block to growth in literacy has not, to my knowledge, been explored at all, perhaps because researchers rarely follow handicapped writers into academic settings beyond the remedial classroom. In any case, it's commonly asserted that nonstandard forms don't impede the comprehensibility of writing. And for most of the writing produced in the basic writing classroom, this is certainly true. However, to communicate intelligibly in the more complex and tightly organized sentence patterns characteristic of mature prose, it is necessary to control the inflections of standard English. My NSD-speaking subjects had gained receptive control over these constructions in the reading they had to do for their college course work, but some were at a loss when they had to produce them in writing for college courses or on the job. One of them was as puzzled as I was when she tried to read this sentence aloud from her own notes on a mental patient,

"The doctor she assign to feel this client is highly suicidal." But when I deciphered her meaning and wrote in the missing letters as follows, "The doctor she's assigned to feels this client is highly suicidal," the writer too saw what she had meant, and understood her errors (with a groan). She remarked, "That's what happens. That's why I get F's on my papers. My teachers don't know what I'm trying to say." It's no wonder that profoundly insecure but intelligent writers like this subject often deliberately avoid complex constructions, and, in consequence, simplify their ideas, projecting the impression in their writing of immature, child-like thinkers.

Thus in a variety of ways nonstandard dialect appears to extend its influence beyond linguistic error, creating problems for writers which indirectly make mastery of the print code harder for them than it is for SD speakers. This indirect influence may account for the larger amounts of print-code error in the writing of the NSD group as compared with the SD.

SUMMARY OF INSIGHTS FROM CASE STUDIES

My case-study observations have led me to two conclusions about sources of error as they apply generally to adult basic writers, regardless of speech patterns:

1. Weaknesses in perceptual skills prevent the writers' detection of many of their own omitted inflectional suffixes and other errors in writing. Such weaknesses may even be the most

comprehensive single source of encoding error for these writers.

2. Phonological influence (the influence of the sounds of speech, not of the structures of language) operates for both standard and nonstandard dialect speakers, can be much more readily remedied by reading and writing practice than NSD grammatical influence is likely to be, and is strongly symptomatic of inadequate mastery of the print code.

The findings of my case-study analysis confirm my general hypothesis that there are peculiarly linguistic (as distinct from sociological and psychological) reasons for the severe problems with the written language almost universally experienced by nonstandard dialect speakers. Specifically, in this connection, I have concluded that:

1. Nonstandard whole-word verb forms, linguistic hypercorrections, and, more often than not, omitted suffixes have deep roots in underlying language patterns, and writers who produce these forms cannot detect or correct them nearly so easily as they can detect and correct errors in the learned visual conventions of the print code.

2. Because NSD speakers must write a language which is in certain ways in conflict with the language they speak, they are more subject than SD speakers to an insecurity which can have a highly adverse effect on their development as learners and writers.

3. Although the distinctive pronunciation patterns of Black English Vernacular are a weaker source of error than grammatical influence, and yield more readily to the counter-influence of

increased mastery of the print code, nevertheless phonological influence is an added handicap for BEV-speakers in learning the written language.

4. For a variety of reasons traceable to nonstandard speech patterns, NSD speakers do not develop the perceptual skills necessary to control some aspects of the written code at the same pace that SD speakers generally do.

IMPLICATIONS FOR FURTHER RESEARCH

Additional intensive case-study investigations would be useful to gain a more precise understanding of the sources of error this study has defined and explored, and to test to what extent its findings apply to younger learners. Also, further empirical research along the lines initiated by this study--using a similar design but a larger sample--is clearly needed to confirm and refine the basic conclusions drawn from the quantitative measures. An important component of this effort would be to develop and validate instruments to measure adults' cognitive and composing abilities.

Beyond sources of error in writing, this study points up the need to reopen the long and currently inconclusive controversy over whether or not NSD interferes with reading.[30] For it's certainly anomalous that when cognitive skills, composing ability, motivation to succeed academically, personal maturity, and level of formal schooling are similar, NSD speakers fail to demonstrate the same level of reading proficiency as SD speakers do. My speculations about NSD speakers' reading behavior and its possible impact on encoding reinforce the suggestion that continued research in this area is needed.

This study suggests possible new directions in the diagnosis of error. Further research refining the diagnostic instruments used--the error category list, the dictation exercise, and reading and editing protocols--might facilitate their use by classroom teachers as a basis for selecting appropriate pedagogies.

Finally, the implications of this study for teaching basic writing must be examined, for different teaching strategies from those commonly used are surely indicated in the light of its conclusions, particularly these: that difficulties in perceiving the code are a larger source of error than simple ignorance of its norms, that nonstandard dialect influence is not less but greater than has been assumed, and that the instructional needs of basic writers who speak a nonstandard dialect are in many ways different from those who speak standard English.

NOTES

[1]David Bartholomae, "The Study of Error," College Composition and Communication, 31 (1980), 253-269.

[2]See Linnea Ehri, "The Role of Orthographic Images in Learning Printed Words," in Orthography, Reading, and Dyslexia, ed. James Kavanaugh and R. L. Venezky (Baltimore: University Park Press, 1980), pp. 155-170; Charles Read, "Writing Is Not the Inverse of Reading," in Writing: The Nature, Development, and Teaching of Written Communication, ed. Carl H. Fredrickson and Joseph F. Dominic (Hillsdale, NJ: Lawrence Erhlbaum Associates, 1981), II, 105-115.

[3]Marcia Farr Whiteman, "Dialect Influence and the Writing of Black and White Americans," Diss., Georgetown University 1976, p. 68.

[4]Samuel A. Kirschner and G. Howard Poteet, "Non-Standard English Usage in the Writing of Black, White and Hispanic Remedial English Students in an Urban Community College," Research in the Teaching of English, 7 (1973), 351-355; Marilyn S. Sternglass, "Close Similarities in the Dialect Features of Black and White College Students in Remedial Composition Classes," TESOL Quarterly, 8 (1974), 271-283.

[5]Patrick Hartwell, "Dialect Interference in Writing: A Critical View," Research in the Teaching of English, 14 (1980), 101-118.

[6]See E. D. Hirsch's enlightening discussion in The Philosophy of Composition (Chicago: University of Chicago Press, 1977), Chaps. 1-3.

[7]Michael Polanyi, Personal Knowledge (Chicago: University of Chicago Press, 1958). See especially Chap. 1.

[8]I considered mainly grammatical features in identifying subjects as speakers of standard or nonstandard dialect. Although linguists distinguish dialects by describing variations in phonological and lexical as well as grammatical features, they identify populations largely on the basis of grammatical features. See Walt Wolfram and R. W. Fasold, The Study of Social Dialects in American English (Englewood Cliffs, NJ: Prentice-Hall, 1974).

[9]Katherine Davis Fishman, "The Joyful Elite," New York Magazine, 18 Jan. 1982, pp. 43-48.

[10]Janet A. Emig, The Composing Processes of Twelfth Graders, Research Report No. 13 (Urbana, IL: National Council of Teachers of English, 1971).

[11]See Marilyn Sternglass, "Applications of the Wilkinson Model of Writing Maturity to College Writing," College Composition and Communication, 33 (1982), 167-175.

[12]Elaine O. Lees of Pittsburgh University is currently doing some interesting research using editing protocols, but mostly with SD speakers.

[13]Whiteman, pp. 68ff.; Bartholomae, pp. 262-264.

[14]Walter Loban, The Language of Elementary School Children, Research Report No. 1 (Urbana, IL: National Council of Teachers of English, 1963).

[15]A significant relationship was found between reading scores and composing scores for the SD group only ($r=.83$; $p<.01$). This finding together with the one just cited (that reading ability and encoding skills do not correlate) underscore the importance of the

distinction between composing and encoding to research on reading/writing relationships. Attention to this distinction could help unravel some of the apparent contradictions and also address some of the gaps Sandra Stotsky finds in this body of research: see her article, "A Review of Research on the Relationship between Reading and Writing: Directions for Future Research," Language Arts, 60 (May, 1983), 627-642.

[16]It's important to stress that this study's sample is composed entirely of adults, that is, students of at least college age, and mostly older. Teachers who may wish to make extrapolations to instruction should keep this limitation in mind.

[17]See Kenneth S. Goodman and Catherine Buck, "Dialect Barriers to Reading Comprehension Revisited," The Reading Teacher, 27 (October 1973), 6-12; see also Yetta Goodman and Carolyn Burke, "Do They Read What They Speak?" in Language and the Language Arts, ed. Johanna S. Destefano and Sharon E. Fox (Boston: Little Brown, 1974), pp. 244-250.

[18]See Courtney B. Cazden, "Suggestions from Early Language Acquisition," in Language and the Language Arts, pp. 42-48; see also William Labov, "The Logic of Nonstandard English," The Florida FL Reporter, 7 (Spring/Summer 1969), 60-74, 169.

[19]See Frank Smith, Writing and the Writer (New York: Holt, Rinehart and Winston, 1982), Chapter 5, for an explanation of one theory accounting for this process.

[20]Sondra Perl, "Five Writers Writing: Case Studies of the Composing Processes of Unskilled College Writers," Diss., New York University 1978, p. 320.

[21]Implications for instruction are outside the scope of this paper, but I feel compelled to mention in passing that, although this conflict is intense for NSD speakers, teaching them to treat composing and encoding as two completely separate stages of writing goes a long way toward reducing this conflict.

[22]For a brilliant commentary by one of the few students of the grapholect on this feature of written English and the problem it creates for writers, see Henry Bradley, "On the Relations between Spoken and Written Language, with Special Reference to English," in Proceedings of the British Academy, 1913-1914 (London: Oxford University Press, 1915).

[23]See in particular Hartwell, pp. 101-118, and Gary N. Underwood, "Bidialectal Freshman Handbooks--the Next Flim-Flam," The Florida FL Reporter, 12 (Spring/Fall 1974), 45-48.

[24]See James L. Funkhouser, "Black English: From Speech to Writing," Diss. (St. Louis University 1976).

[25]Patrick Groff, "Children's Spelling of Features of BE," Research in the Teaching of English, 12 (1978), 21-28; see also Bruce Cronnell, "Black English and Spelling," Research in the Teaching of English, 13 (1979), 81-90.

[26]Although errors like these, I found, usually reflect the writer's pronounciation patterns, there seem to be occasional exceptions indicating that an error of this kind is not necessarily phonologically-based (note when for went in the SD speakers' transcription). Subjects in both groups pronounced some of the final consonants which they omitted in writing. See Bartholomae, p. 264, on this phenomenon.

[27]Polanyi, pp. 55-57.

[28]For an effort to study this apparent handicap for NSD speakers in the acquisition of literacy, see Sylvia Farnham-Diggory, "How to Study Reading: Some Language Information Processing Ways," in The Acquisition of Reading, ed. Frank B. Murray and John J. Pikulski (Baltimore: University Park Press, 1978), pp. 61-89.

[29]For an explanation of the instructional approach used in this program, see Mary Epes, Carolyn Kirkpatrick, and Michael Southwell, "The COMP-LAB Project: An Experimental Basic Writing Course," Journal of Basic Writing, 2 (Spring/Summer 1979), 19-37.

[30]For an excellent summation of the status of the issue, which has moved forward little in the intervening decade, see Joan C. Baratz, "The Relationship of Black English to Reading: A Review of Research," in Language Differences: Do They Interfere?, ed. James L. Laffey and Roger Shuy (Newark,DEL: International Reading Association, 1973), pp. 101-113.

APPENDIX A

Dictation Exercise

NOTE: Slashes indicate a signal to stop the tape and write what has been heard.

Some people have strange fears./ For example,/ after a shower of meteors passed over New Mexico,/ a woman in Vermont/ refused to leave her house for five years./ A man who has a violent fear of lightning/ swears that he's going to find a place to live/ where rain never falls./ Several women/ who live in an ideal environment in Arizona/ are so frightened of germs/ that they recently bought surgical masks/ which they wear night and day,/ whether at home or at work./ Even though people with these phobias/ are often quite intelligent,/ they're too terrified to listen to reason./ It's no use telling them/ that they're being silly./ Their minds are paralyzed by fear,/ and they just can't hear what you're saying./

On the other hand,/ some people's fears are based on personal experience./ A friend of mine is frightened of elevators,/ but she certainly has a good reason./ Whenever she gets on a crowded elevator,/ this shocking memory always comes back to haunt her./ It all began in Georgia/ where my friend usually spends her vacation/ with her cousins./ Once she went to stay with them/ in an old mansion/ which they had leased for the summer./ The first night she slept there,/ around midnight/ there were strange noises under her window./ She jumped up and looked out./ In the moonlight,/ she saw

a coach and four horses./ A coachman with a big hooked nose/ said in a harsh voice,/ "There's room for one more."/ And then he cracked his whip/ and drove off./ My friend tried to laugh it off/ as a bad dream,/ but the same thing happened the next two nights./ Finally, she gave up,/ packed all her bags,/ and flew home to Chicago./ She was so worried that she went straight to a psychiatrist./ As she rode up in the elevator,/ she asked herself/ if she was losing her mind./ But the psychiatrist told her/ that she was taking the whole thing too seriously./ As she walked back toward the elevator,/ she began to feel a lot better./ When the elevator doors opened,/ the operator, who had a big hooked nose, announced,/ "There is room for one more."/ My friend stepped back out of the elevator in terror,/ and, as the doors shut in her face,/ she heard screams./ The elevator had plunged straight down forty floors./

So it doesn't seem at all strange/ that my friend begins to tremble/ every time an elevator stops/ and someone says,/ "There is room for one more!"/

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APPENDIX B

Error Category List

1. ERRORS IN SENTENCE PUNCTUATION: misused or omitted periods, commas, and semicolons resulting in run-together sentences, comma splices, and sentence fragments

2. ERRORS IN PRONOUNS AND ADVERBS: incorrect forms (e.g.: Her and me are just alike; They treat theirselfs well; She goes too quick for me)

3. SUBJECT-VERB AGREEMENT ERRORS INVOLVING INTERVENING WORDS (e.g.: One of the keys were missing.)

4. ERRORS IN WRITING CONVENTIONS:

(1) Failure to indent paragraphs; blank space on a line not followed by paragraph indentation on the next line

(2) Writing two words or more as one, or one word as two or more (e.g.: alot, never the less)

(3) Failure to use capital letters appropriately (e.g.: new york city, my High School)

(4) A comma used in a manifestly inappropriate way (e.g.: Too many people, are out of work)

(5) Omission or misuse of apostrophes in contractions or possessive forms (e.g.: That cant be her's.)

(6) Misuse of quotation marks or omission of quotation marks in a context that demands them (e.g.: He yelled stop "thief)

5. SPELLING ERRORS: word spellings which are not listed in a dictionary (e.g.: thier, enviorment)

6. "WRONG WORDS": confusion in the use of common homophones (e.g.: their/there/they're); or in the use of words which are similarly pronounced or look alike in print (e.g.: than/then; when/went; quit/quite; since/sense). These words are listed in the dictionary but have meanings obviously different from the one intended by the writer.

7. OMITTED WORDS, including omitted copulae (e.g.: She reached into her and took out five dollars; He working)

8. SUFFIXES OMITTED where they belong: -s, -es, -d, -ed, -t and -ing suffixes missing from nouns, verbs, and participial forms (e.g.: The follow is about a friend of mine who got marry two year ago; Now she say she hate her husband mother; The key belong to me). Also included in this category are these two common errors: sometime for sometimes, and alway for always. Note: Errors like "One of the keys belong to me" which may appear to belong in this category have already been counted in #2 above.

9. SUFFIXES ADDED where they don't belong (e.g.: The childrens didn't seemed upsetted even though the money they had losted was mines). Note: Errors are counted in this category only if the word is correct when the inappropriate suffix is removed (e.g.: "Yesterday she droved" belongs here, but "Yesterday she drived" belongs in category #10 below.)

10. WHOLE-WORD VERB FORMS used in a way which is plainly wrong in standard written English. These are forms which are not inflected by adding a suffix like those in #8 (e.g.: The keys was missing; She don't care; He be working; She seen the doctor yesterday; Last year she run away twice).

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TABLE 1

Comparison of Standard and Nonstandard Dialect Speakers' Error Rates (Based on errors per 100 words)

	SD Speakers N = 13	NSD Speakers N = 13	
	Mean	Mean	t-value
Own writing	5.03	8.61	2.691 *
Dictation	9.61	15.01	2.713 *

* $p < .05$

TABLE 2

Comparison of Standard and Nonstandard Dialect Speakers' Summary and Composing Scores

	SD Speakers N = 13	NSD Speakers N = 13	
	Mean	Mean	t-value
Summary Scores	5.54	5.33	.265
Composing Scores	6.45	5.70	.834

TABLE 3

Comparison of Standard and Nonstandard Dialect Speakers' Reading Scores

	SD Speakers N = 13	NSD Speakers N = 13	
	Mean	Mean	t-value
DRP (Reading)	76.00	62.15	3.419 **
Time (in minutes)	77.69	108.46	2.310 *

** $p < .01$
* $p < .05$

TABLE 4

Error Types of Standard and Nonstandard Dialect Speakers in Own Writing and in Dictation, by Mean Number of Errors

	SD N = 13	NSD N = 13	SD N = 13	NSD N = 13
Error Categories	Own Writing		Dictation	
Sentence punctuation	10.8	12.8	1.8	2.8
Sub-vb agr/ pronoun/adverb	6.2	7.5	0.0	0.0
Writing conventions	30.8	37.3	18.0	22.8
Spelling	27.9	25.3	9.8	12.8
Wrong words	13.6	18.8	7.8	9.5
Omitted words	1.6	2.2	0.7	2.0
Suffixes omitted	6.4	29.2	1.7	8.4
Suffixes added	0.0	4.5	0.0	1.8
Wrong whole-word verb forms	0.0	5.6	0.0	0.9

TABLE 5

Distribution of Error Types by Percentages:
Standard vs. Nonstandard Dialect Speakers

	SD N = 13	NSD N = 13	SD N = 13	NSD N = 13
Error Categories	Own Writing		Dictation	
Sentence punctuation	11.1%	9.1%	4.5%	4.6%
Sub-vb agr/ pronoun/adverb	6.4	5.3	0.0	0.0
Writing conventions	31.6	26.6	45.2	37.3
Spelling	28.7	18.1	24.6	21.0
Wrong words	14.0	11.3	19.6	15.5
Omitted words	1.6	1.6	1.8	3.3
Suffixes omitted	6.6	20.8	4.3	13.8
Suffixes added	0.0	3.2	0.0	3.0
Wrong whole-word verb forms	0.0	4.0	0.0	1.5
Totals	100.0%	100.0%	100.0%	100.0%

TABLE 6

Distribution of Error Types When Errors of Possible Linguistic Origin Are Excluded: Standard vs. Nonstandard Dialect Speakers

	SD N = 13	NSD N = 13
Error Categories	Own Writing	
Sentence punctuation	11.9%	12.8%
Sub-vb agr/ pronoun/adverb	6.8	7.4
Writing conventions	33.9	37.0
Spelling	30.7	25.0
Wrong words	14.9	15.6
Omitted words	1.8	2.2
Totals	100.0%	100.0%